Harris County Flood Control District

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Reducing Flooding Potential.
Increasing Quality of Life.

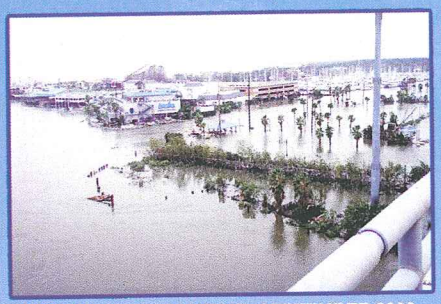
8 HURRICANE Myths and Facts

MYTH

Hurricane Season is the only time when Harris County is vulnerable to flooding.

FACT

Harris County is vulnerable to flooding year-round. This area has experienced flooding in every month. Of the 18 major flooding events in Harris County since 1989, only five have come from tropical storms or hurricanes. In fact, flooding tends to be more common in the spring and in the fall when stalling frontal systems and moisture are present over the area.



KEMAH - HURRICANE IKE, SEPTEMBER 2008

STORM SURGE

A gradual rise in sea water levels prior to and during the landfall of a tropical storm or hurricane.

MYTH

Storm surge from a hurricane is similar to a tsunami.

FACT

The gradual rise in sea water levels from a hurricane is very different from the series of voluminous waves caused by a tsunami. Tsunamis are caused by the displacement of large volumes of water, usually from earthquakes. Storm surge is a gradual rise in the sea surface prior to and during landfall of a huricane. Slow rises in water levels can begin as early as 12 to 24 hours before the onset of strong winds and increase rapidly as the center of the storm makes landfall. The most destructive force of storm surge is the constant wind-driven waves that ride on top of the elevated sea surface and repeatedly batter structures.

MYTH

Hurricanes produce less (or more) rainfall than tropical storms.

FACT

Tropical storms become hurricanes based on the speed of the wind, but wind speed does not give an indication of potential rainfall. Tropical storms and hurricanes can both produce significant amounts of rain and cause flooding. The amount of rainfall produced by a hurricane correlates to the storm's forward speed, or how fast it is moving. After landfall, hurricanes will weaken to tropical storm status and can continue to produce significant rainfall far inland. An interesting rule of thumb: Divide 100 by the forward speed of a hurricane or tropical storm to estimate the total amount of rain that will be produced.

MYTH

The highest storm surge occurs along the immediate coast.

FACT

Storm surge tends to be highest in the heads of bays, at the mouths of rivers and creeks, and within inlets where sea water is forced to rise vertically. For a large hurricane, the maximum water level rise on Galveston Island may be 18 to 20 feet above sea level, while values could be closer to 30 feet near the entrance of the Houston Ship Channel and the San Jacinto River, and as much as 25 feet in Clear Lake.

MYTH

I live near the coast but am outside a mapped coastal floodplain, so I will not flood from storm surge.

FACT

Residents near the coast yet outside a mapped coastal floodplain can still be vulnerable to flooding from storm surge. For Harris County, the mapped coastal floodplain shows homes at risk from a "100-year" storm surge, which has a minimum of a 1 percent chance of occurring in any given year and causing sea water to rise an average of 11 to 13 feet above sea level. However, maximum storm surge can be as high as 30 feet above sea level in some areas during extreme and unique conditions. It is strongly advised that all residents have flood insurance, even if it is not required.

MYTH

A storm surge will inhibit our bayou system's ability to drain.

FACT

Most of our rivers, creeks and bayous are upland and all drain by gravity. Because of their natural slope toward Galveston Bay and the Gulf of Mexico, a storm surge caused by a hurricane will not impede this process. Of the roughly 2,500 miles of channel in Harris County, only a small portion near Galveston Bay will be influenced by storm surge.

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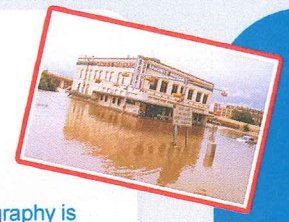
MYTH

I've lived in my house for more than 30 years, and I've never flooded. Therefore, I don't need flood insurance.

FACT

Most Harris County residents are vulnerable to flooding because our topography is flat, we have impermeable clay soils, and we are prone to storms that produce large amounts of rain in shorts periods of time. Many areas in the county have been spared from extreme rainfall in recent history, but that fact can change like the weather. This area has flooded for centuries, so it's important not to rely only on your recent experience to predict flooding risks.



MYTH

A 100-year flood only occurs once every 100 years.

FACT

A 100-year flood can occur multiple times throughout a century. Also called a 1 percent flood, this event has a 1 percent chance of occurring at any given location in any given year. Doesn't sound like a lot? Think of it this way: A 1 percent flood has a 26 percent chance of occurring during a 30-year period of time – the duration of most home mortgages.

FLOOD FACTS

- Flooding is the primary natural hazard for Harris County and the most common natural catastrophe worldwide. Flooding causes more deaths and damages than any other natural disaster.
- Everyone lives in a flood zone – it's just a question of whether you live in a low, moderate, or high-risk area.
- Homeowners insurance does not cover damages from flooding. A separate flood insurance policy is needed for that.
- Last year, one-third of all claims paid by the National Flood Insurance Program were for policies in low-risk areas.
- Harris County residents are at risk for flooding year-round, not just during Hurricane Season. In fact, this area has experienced a major flood in every month of the year.
- The Flood Control District is responsible for bayous and many of their tributaries, while the City of Houston, other municipalities and unincorporated Harris County concentrate on underground storm sewers and roadside ditches.

MYTH

If I didn't flood during Tropical Storm Allison in 2001, chances are I won't ever flood.

FACT

The greatest rainfall brought by Tropical Storm Allison hit the northeast part of Houston, dropping more than 28 inches of rain in 12 hours and 35 inches of rain in five days. However, some areas received less than 5 inches of rain. Flooding is all about the rain: where it falls, how long it falls and how much falls. Had the damaging rains of Allison targeted other areas, they would have experienced similar, devastating flooding.

MYTH

A storm surge will inhibit our bayou system's ability to drain.

FACT

Most of our rivers, creeks, and bayous are upland and all drain by gravity. Because of their natural slope toward Galveston Bay and the Gulf of Mexico, a storm surge caused by a hurricane will not impede this process. Of the roughly 2,500 miles of channel in Harris County, only a small portion near Galveston Bay will be influenced by storm surge.

MYTH

I don't need flood insurance because I'm not in a mapped floodplain.

FACT

We are all at risk for flooding regardless of our proximity to a mapped floodplain. Flood Insurance Rate Maps (floodplain maps) published by the Federal Emergency Management Agency are good indicators of flooding risks from bayous and streams topping their banks. However, they do not show flooding risks from storm sewers and roadside ditches exceeding their capacity, risks from unstudied channels, or risks from storms greater than a 500-year flood -- such as Tropical Storm Allison in 2001.

MYTH

New land development causes flooding.

FACT

Strict regulations by the city and by the county dating back to the early 1980s mandate that additional stormwater runoff created by new land development be detained on site, in regional stormwater detention basins, or by other measures. Although development that took place prior to the 1980s was not as regulated, the Flood Control District has spent more than seven decades building projects that reduce flooding risks and damages. In fact, today's floodplains are smaller than they ever have been in Harris County.

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8 HURRICANE Myths and Facts

7 MYTH

A hurricane's category determines how high its storm surge will be.

FACT

The height, duration and extent of storm surge are best predicted by a hurricane's size, rather than its category. In 2008, Hurricane Dolly produced a 4- to 6-foot storm surge on South Padre Island, while Hurricane Ike produced a 16- to 18-foot storm surge on Bolivar Peninsula. Although both were Category 2 hurricanes, Ike was four times larger than Dolly. When making decisions about evacuating, focus on the forecasted heights of storm surge and directions from emergency management officials.

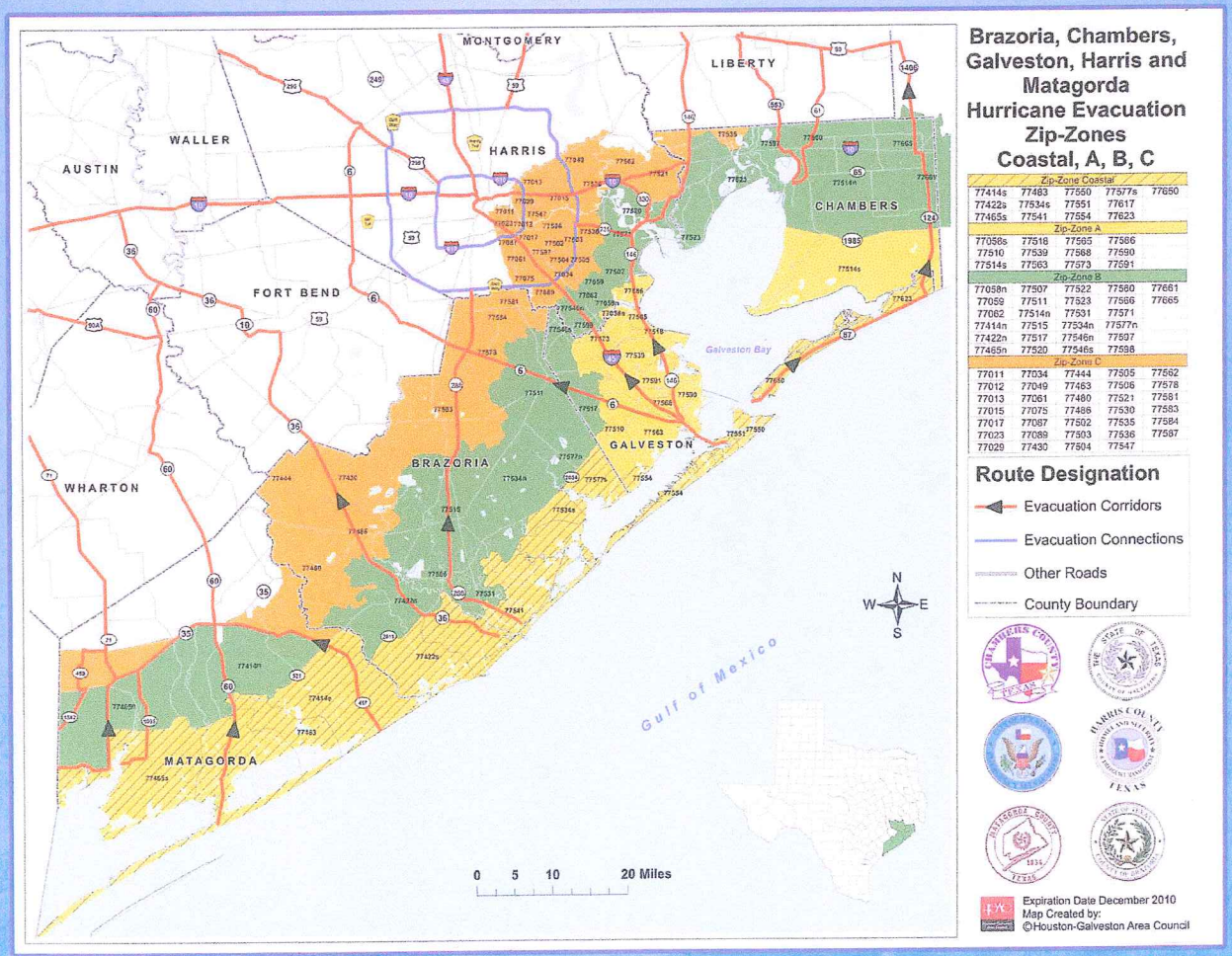
8 MYTH

All residents living in a mapped floodplain should evacuate when a tropical storm or hurricane approaches.

FACT

Only residents living in storm surge evacuation zones or residents ordered to evacuate should leave. The purpose of evacuation is to remove residents in danger of being flooded from storm surge inundation. Inland residents should keep major highways clear to allow coastal residents to evacuate. Always remember: "Run from the water (storm surge) and hide from the wind."

STORM SURGE EVACUATION ZONES



Brazoria, Chambers, Galveston, Harris and Matagorda Hurricane Evacuation Zip-Zones Coastal, A, B, C

Zip-Zone Coastal				
77414s	77483	77550	77577s	77650
77422s	77534s	77551	77617	
77465s	77541	77554	77623	
Zip-Zone A				
77058s	77518	77565	77586	
77510	77539	77568	77590	
77514s	77563	77573	77591	
Zip-Zone B				
77058n	77507	77522	77580	77661
77059	77511	77523	77586	77665
77062	77514n	77531	77571	
77414n	77515	77534n	77577n	
77422n	77517	77546n	77597	
77465n	77520	77546s	77598	
Zip-Zone C				
77011	77034	77444	77505	77562
77012	77049	77463	77506	77578
77013	77061	77480	77521	77581
77015	77075	77486	77530	77583
77017	77087	77502	77535	77584
77023	77089	77503	77536	77587
77029	77430	77504	77547	

Route Designation

- Evacuation Corridors
- Evacuation Connections
- Other Roads
- County Boundary

Expiration Date December 2010
Map Created by:
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